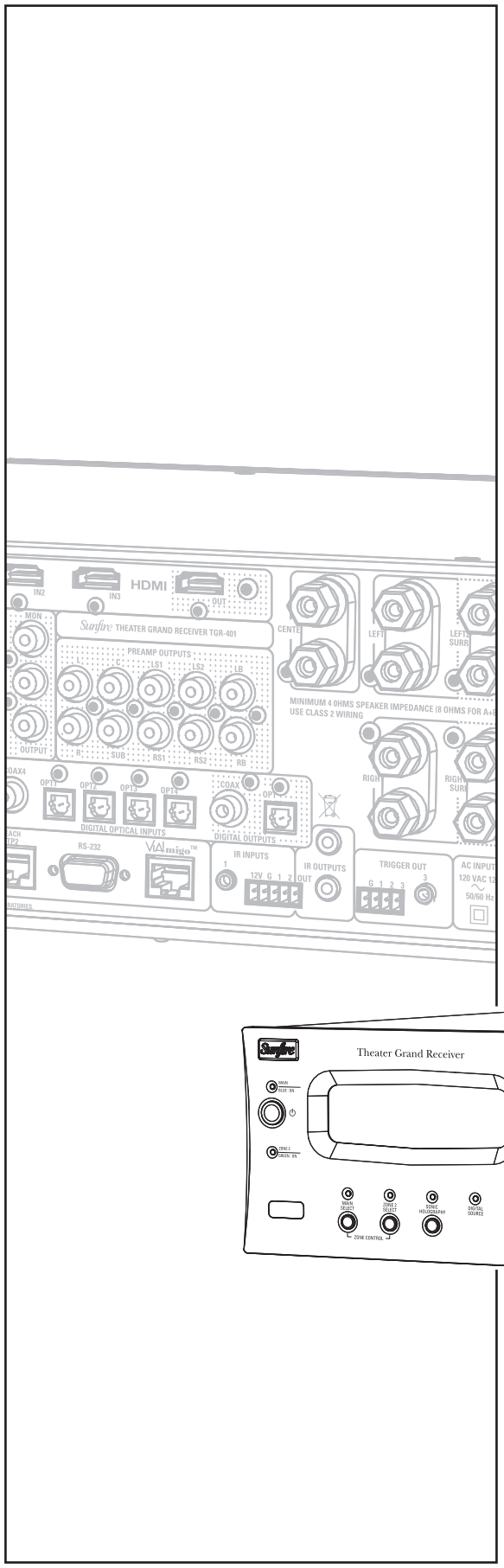
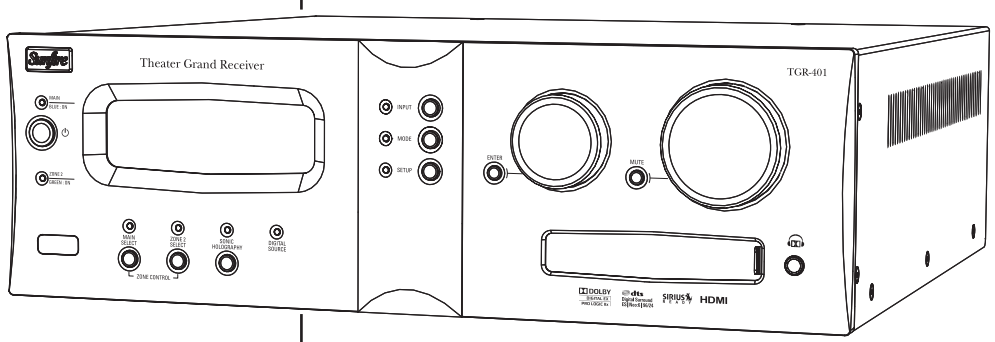
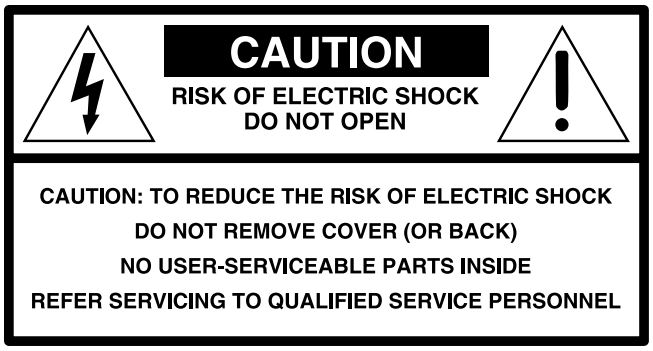


Sunfire®

Theater Grand Receiver
TGR-401
TGR-401-230



User's Manual


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Important Safety Instructions

1. Read Instructions

2. Keep these Instructions

3. Heed all Warnings.

4. Follow all Instructions

5. Do not use this apparatus near water.

6. Clean only with a dry cloth.

7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

8. Unplug this apparatus during lightning storms or when unused for long periods of time.

9. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

10. Ventilation — The apparatus should be situated so that its location or position does not interfere with its proper ventilation. For example, the apparatus should not be situated on a bed, sofa, rug, or similar surface that may block any ventilation openings; or placed in a built-in installation such as a bookcase, cabinet, or closed equipment rack that may impede the flow of air through ventilation openings.

11. Power Sources — The apparatus should be connected to a power supply only of the type described in these operation instructions or as marked on the apparatus.

12. Power Cord Protection — Power-supply cords should be routed so that they are not likely to be walked upon or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit the apparatus.

13. Non-use Periods—The power cord of the apparatus should be unplugged from the outlet when unused for a long period of time.

14. Object and Liquid Entry — Care should be taken so that objects do not fall into and liquids are not spilled into the inside of the apparatus.

15. Servicing — The user should not attempt to service the apparatus beyond those means described in this operating manual. All other servicing should be referred to qualified service personnel.

PORTABLE CART WARNING

Carts and stands - The Component should be used only with a cart or stand that is recommended by the manufacturer.
A Component and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the Component and cart combination to overturn.

16. To prevent electric shock, do not use this polarized plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.
Pour préevenir les chocs électriques ne pas utiliser cette fiche polariseé avec un prolongateur, un prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans laisser aucune parIVe à découvert.

17. Grounding or Polarization — Precautions should be taken so that the grounding or polarization means of the Component is not defeated.

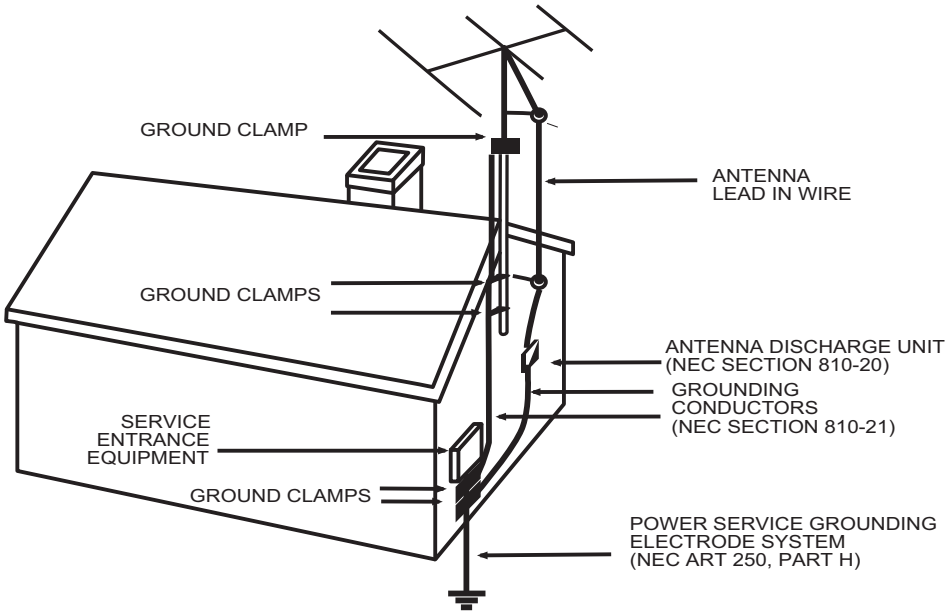
This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

ATTENTION — Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant las limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.

WARNING – TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.
ATTENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

EXAMPLE OF ANTENNA GROUNDING ACCORDING TO NATIONAL ELECTRICAL CODE INSTRUCTIONS CONTAINED IN ARTICLE 810–"RADIO AND TELEVISION EQUIPMENT"



NEC NATIONAL ELECTRICAL CODE.

NOTE TO CATV INSTALLER
This reminder is to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.
OUTSIDE ANTENNA GROUNDING
If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the lead-in wire to an antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure above.

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Read the **Safety Instructions** carefully before connecting and using your Sunfire Theater Grand Receiver TGR-401.

Chapter 1 is a general introduction to the features, details and installation of your TGR-401.

Chapter 2 shows many options for connecting your source equipment to the TGR-401.

Chapter 3 describes the details and operation of the advanced remote control.

Chapter 4 shows the various menus of the On Screen Display, and how to adjust and customize your TGR-401.

Chapter 5 describes the available modes, options and operational details of the TGR-401.

The Appendix shows some additional information, including a troubleshooting guide, optional components, the warranty and service assistance details

To find out more about this and other Sunfire products, please visit our website: **www.sunfire.com**

Introduction

Thank you for purchasing a Sunfire TGR-401 Theater Grand Receiver. We hope that you enjoy it and the music it makes as much as we have enjoyed creating it for you.

As with our entire line of products, the TGR-401 is brimming with exclusive, high-performance technologies that deliver powerful movie and music experiences. These include the following features:

Amplifier:

- Patented Tracking Downconverter™ power supply
- 7 x 200W into 8 ohms, with no more than 0.5% THD

Features:

- SIRIUS®-ready
- AM/FM tuners with RDS feedback
- VIA!migo™ support for native iPod® control via OSD and front panel
- Two touchpad ports for optional Olé-2SF Film Interactive touchpads. Feedback for functions and metadata from SIRIUS and iPod
- Automatic setup and room correction w/ included microphone
- Input volume matching
- A/V sync to match audio to video

Connections:

- 4 Analog inputs, 2 outputs
- 4 Video inputs, 2 outputs
- 4 optical digital inputs, 1 output
- 4 coaxial digital inputs, 1 output
- 7.1 multi-channel input
- 7.1 preamp outputs (RCA)
- Assignable, HD-ready front panel input
- CEA color standard, gold-plated binding posts

Processing:

- Sonic Holography for enhanced imaging
- Dolby Digital EX and ProLogic IIx
- Dolby Headphone
- DTS-ES, Neo:6, and DTS-96/24
- SourceDirect mode for DSP bypass

Video:

- Sunfire-designed, 1080p HDMI v1.3a switching (3 in / 1 out)
- 100 MHz component switching (3 in / 1 out)
- Video upconversion to component

Integration features

- Bi-directional RS-232 input
- 2 IR inputs, 3 outputs
- 3 Assignable 12V trigger outputs
- On-the-fly powered Zone 2 speaker switching
- Maximum and power-on volume settings for Main and Zone 2
- Power-on source setting for Main and Zone 2
- PC application for initial setup, Olé-2SF touchpad programming, and software upgrades
- LR2/Surr2 configurable binding posts

Miscellaneous:

- Long-grain, solid aluminum front panel
- Elegant blue LEDs for visual feedback
- Removable IEC cord

Remote control features

- Fully backlit
- Pre-programmed for most brands of A/V equipment
- Learns commands from your other remote controls
- Macro feature lets you program a sequence of control steps
- Operates up to 19 components
- Does not lose programming memory when changing batteries
- RF capable with optional MRF-260 RF base

Optional accessories

See your Sunfire dealer or visit our web site for more information regarding the following accessories:

- SRK-200 Rack mount kit
- Olé-2SF touchpads
- VIA!migo iPod dock
- SC-H1P1 SIRIUS Satellite Radio antenna/tuner kit
- MRF-260 RF remote control base

CHAPTER 1

Unpacking

Your TGR-401 should reach you in perfect condition. If you do notice any shipping damage, please contact your Sunfire Dealer immediately.

Gently lift out the unit and remove all the packing material and accessories. It is important to save all the packing materials and the box in case your TGR-401 ever needs to be moved or shipped for repair.

Make sure that you keep your sales receipt. It is the only way to establish the duration of your Limited Warranty and it may come in useful for insurance purposes.

Please take a moment to fill out and mail the Sunfire Customer Response card. Also read the serial number located on the rear panel, and record it here:

Serial #:

_____

Purchased at:

_____

_____

_____

_____

Date: _____

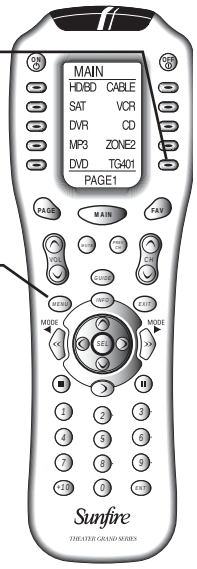
Overview

Most features of the TGR-401 can be operated by the remote control's TG401 section.

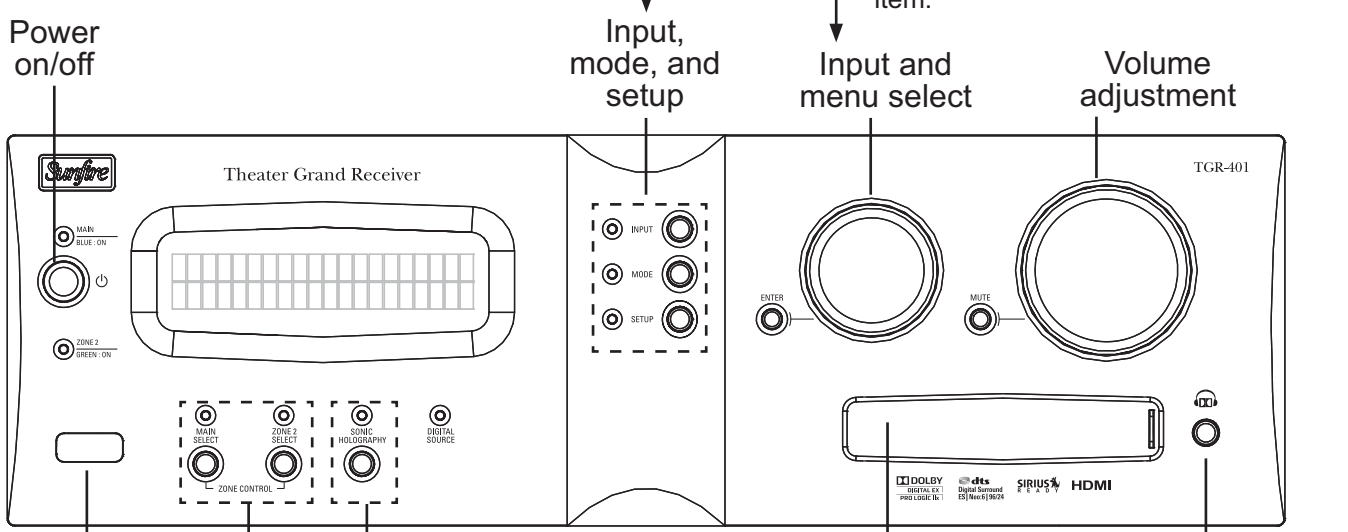
For the best Home Theater performance, you should calibrate your speakers and customize the TGR-401 settings for your system. Press the MENU button on the remote control to activate the On Screen Display (OSD). This has several menus which will allow you to set up your speakers and calibrate your system correctly.

The remote can also be used to activate and control all features of the second zone.

The TGR-401-230 is the export model, set for 220-240 VAC operation. Its operation is identical to the TGR-401 described in this manual.



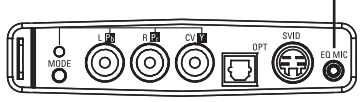
Use the center three buttons to select either the input, mode, or setup menus. Then use the input and menu selection knob to find the item. In the setup menu, rotate the knob to move through various menu items and press the nearby enter button to select an item.



Select MAIN then any commands that follow will affect that zone.

Select Zone 2, then any commands that follow within several seconds will affect Zone 2. It returns to Main Zone control after several seconds of inactivity.

Select Sonic Holography for an enhanced 3D image of any source.



CHAPTER 1

Quick Start Guide

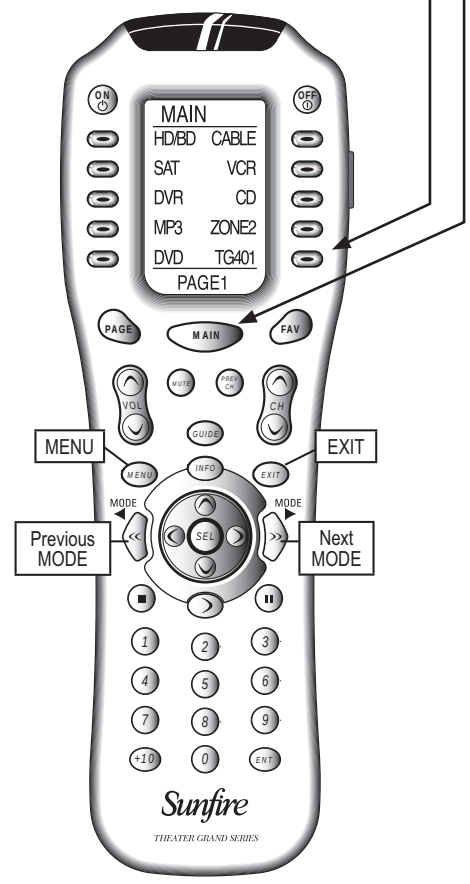
We hope that the following details will help you get started using your TGR-401.

1. Take care to read and follow the safety instructions on pages 2-3. Also make sure that you read the notes and details throughout the manual, especially notes marked with a warning triangle (⚠).
2. Add four new AAA batteries to the remote control.
3. Connect your source equipment and speakers to the TGR-401.

⚠ Make sure that all of your equipment remains unplugged from the AC mains until you have made all the connections.

4. In your DVD player's Audio setup menu, set the digital output to **BITSTREAM**. If this is not set correctly, the TGR-401 cannot decode the digital information for 5.1 surround sound playback.
5. The TGR-401's bass management system allows the bass from each speaker to be redirected to a subwoofer. Larger speakers can play the full frequency range, and smaller speakers such as satellite types can have their bass redirected. See page 38 for details.

   Make a note of which speakers you would like to play the full frequency range (Large) and those which will have their bass redirected. Also make a note of the approximate distance of each speaker from your listening position.
6. The surround back speaker outputs can be used for powering surround back, or Zone 2 speakers. See page 22
7. Turn on the TGR-401, and then turn on your TV and source equipment.
8. Press the remote MAIN button a few times to make sure you are on the Main Page 1 Menu in the remote's display.
9. Set the remote to operate the TGR-401 by pressing the TG401 button.



10. The VOL and MUTE buttons will control the TGR-401 no matter which source component the remote is set to operate. The PUNCH command allows you to change this if required (see page 28).
11. Turn down the TGR-401 volume and use the remote or front panel to select a video source as follows: If you have followed step 9, the remote now shows the inputs that can be selected. Select one. (From the TGR-401 front panel, you can first press the input button (center, top) and then rotate the knob to select the desired input.)
12. Play a source, such as a DVD, and bring up the volume to suit your taste. Make sure the video can be seen in the TV monitor.
13. Stop or pause the source.

The TGR-401 now needs to be set-up correctly to suit your speakers and system. This is done using the TGR-401 on screen display (OSD) menus. It can be done either automatically or manually, as can the EQ adjustment. This needs to be done when you use your system for the first time, or if you change anything such as the speakers or their position.

Automatic Setup

The TGR-401 comes with a measurement microphone that plugs into the front panel microphone input.

Measurement microphone (supplied)

The automatic setup procedure uses the microphone to measure and evaluate your system. After the measurements are complete, the levels, crossover frequency, and delay times of the speakers are automatically adjusted for the best performance.

Any problems with the speakers are indicated, for example, it will let you know if there is low output from a speaker, or if the polarity is reversed.

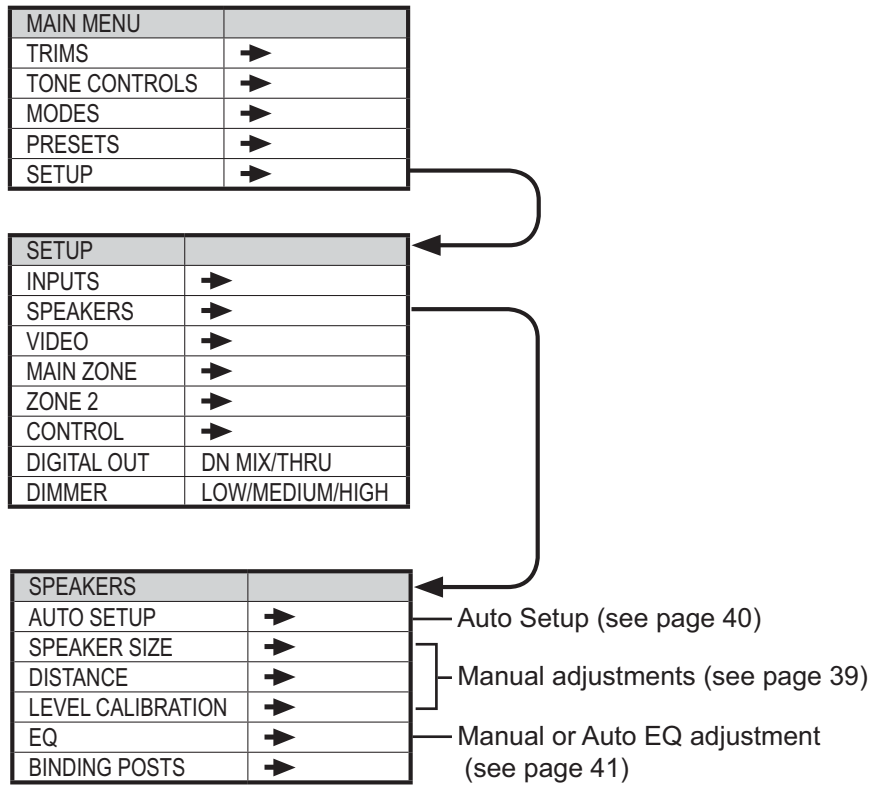
Details of the auto-setup are shown on page 40. Alternatively, you can use the manual procedure to set up your system.

Manual Setup

There are three main manual adjustments that can be made using the SPEAKERS OSD menu:

1. The SPEAKER SIZE menu allows you to enter the crossover frequency of each speaker. Using bass management, any bass below the crossover frequency will be redirected to your subwoofer.
2. The LEVEL CALIBRATION menu allows you to adjust the level of each speaker until they are all playing at the same level. (The level calibration test tones are also a quick way to check that all your speakers are working.)
3. The SPEAKER DISTANCE menu allows you to enter the distance that each speaker is away from your listening position. The TGR-401 then calculates the delay times.

Details of the manual setup procedure are shown on page 39.



EQ Adjustment

The measurement microphone can also be used to measure the system response and adjust the EQ automatically. This will provide a smooth response and remove room effects.

Alternatively, the EQ of pairs of speakers, or all speakers can be adjusted manually to suit your taste.

Details of the auto-EQ and manual EQ adjustment are shown on page 41.

OSD Menus

The SPEAKERS menu is used to run the auto-setup, manual setup, and EQ adjustment.

1. Press the MENU button on the remote to bring up the MAIN MENU of the OSD on your TV.
2. Use the navigation pad left, right, up and down buttons to navigate through the menus in the next steps.

NOTE: Quit the OSD at any time by pressing the nearby EXIT button. Any changes will be saved. There is no need to navigate back through previous pages, unless you want to make more changes. The TGR-401 front panel display shows the same messages as the OSD.

3. In the MAIN MENU, select SETUP, and from there select the SPEAKERS Menu.
4. In the SPEAKERS menu are the options for AUTO SETUP, SPEAKER SIZE, DISTANCE, LEVEL CALIBRATION, and EQ.
5. When you have finished the setup and/or EQ adjustment, press the remote's EXIT button to quit the OSD.

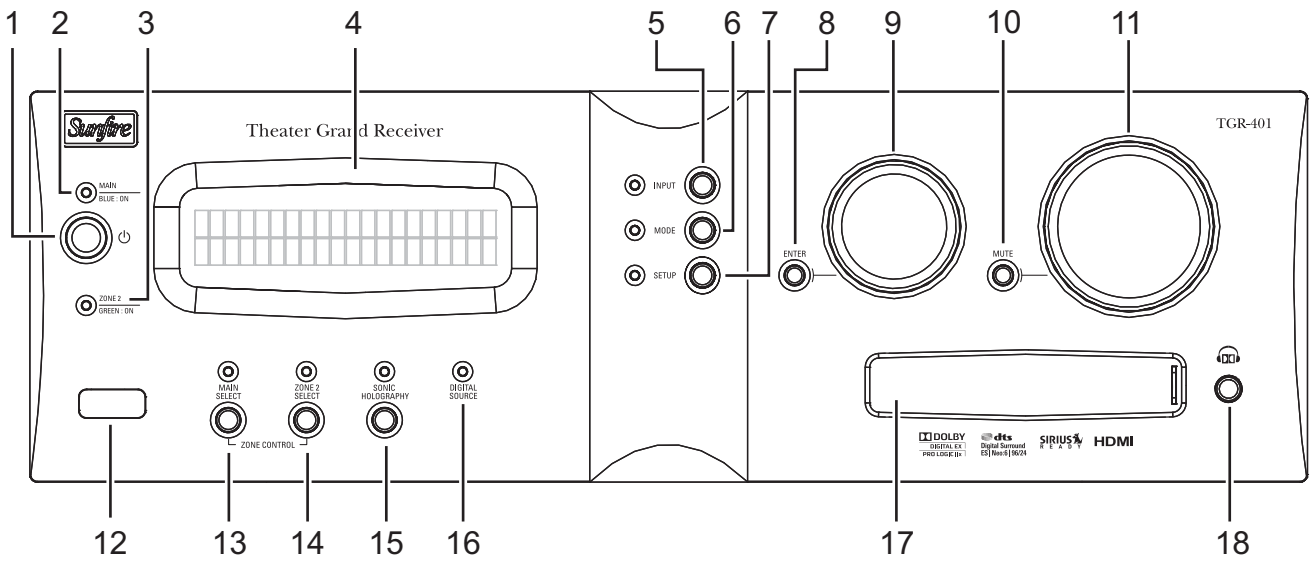
Conclusion

Once the automatic setup or manual setup is finished, and any EQ adjustments made, the TGR-401 is setup correctly and ready for action.

If you play a Dolby Digital or DTS encoded source, the TGR-401 will automatically select the correct surround mode. If it is a 2-channel source, you can select a surround mode using the remote's MODE buttons or from the front panel.

The TGR-401 has many more options that are described in further detail in this manual. These options will help you customize the TGR-401 to suit your tastes. You can do this after you have used the TGR-401 for a while and have a better idea of how you would like to customize your system.

Front Panel Features



1. Power

This button turns the TGR-401 on (fully powered up) or into Standby mode (asleep, but can be turned on remotely).

The blue LED above the power switch is on when the TGR-401 main zone is turned on. When the TGR-401 is turned off, the LED will turn red.

To fully turn off power to the TGR-401, for example if you are going on vacation for a week or two, then use the rear panel power switch.

Press Zone 2 select (14) followed by this power button to turn on Zone 2.

2. Main LED

This blue LED is on when the Main zone is on. It flashes red when the remote control is used.

3. Zone 2 LED

This green LED is on when Zone 2 is on.

4. Display

This display shows which input is selected, the volume level, surround mode, and other features such as the setup menus.

5. Input

Press this button, then cycle through the inputs with the manual selector (9). The LED will light.

6. Mode

Press this, then cycle through the various modes with the manual selector (9). The LED will light.

7. Setup

Press this, then cycle through the available setup items with the manual selector (9). Press enter (8) to select the required setup item. Press Input (5) or Mode (6) to exit the setup menus. The LED will light when in setup mode.

8. Enter

Use this and the manual selector knob (9) during setup (7). When a desired menu item is found, press enter to select that item.

Note: Setup (7) and Enter (8) can be used to increase or decrease dB values within the menus, and used for other things such as to change the letters of a source name for example.

9. Manual Selector

Use this to cycle through the various menu items such as the inputs (when input (5) is pressed), the modes (when mode (6) is pressed), and setup (when setup (7) is pressed).

10. Mute

This turns off the sound. Press it again, or adjust the volume control to return to the previous volume level.

11. Volume

Rotate this manual control clockwise to increase the volume. The level will appear in the front panel display. Note that the control knob does not rotate when the remote is used. When turning on a new source, make sure the level is low, such as 20, and increase it slowly.

Note: When the TGR-401 is powered on, the volume is set to what is was when it was turned off. It can also be set to come on at a preset max or min volume (see the Main Zone in the Setup menu).

12. IR Receiver Window

This window should be clean and free from obstruction for the remote control to work correctly.

13. Main Select

Any changes made after pressing this button will affect the main zone.

14. Zone 2 Select

Any changes made after pressing this button will affect Zone 2. If no changes are made for 8 seconds, the unit reverts back to main select. To turn on Zone 2, press this button first, followed by the power button.

15. Sonic Holography

Engage this to add a three dimensional effect, especially to stereo listening.

16. Digital Input

This will light when a digital audio source is playing.

17. Front Door

Sliding this door to the left reveals the front input connections and the connection point for the supplied measurement microphone. This is an ideal place for connecting video game consoles or video cameras.

The three RCA inputs can be:

- Left audio in, right audio in, and composite video in.

  or, if the mode button is pressed, they can be:

- Pb, Pr, and Y component video inputs (the LED will light).

There is also a digital optical input, and an S-Video input.

The measurement microphone connects in the right hand corner during the auto-setup and auto-EQ procedures.

The front input can be selected by the remote control or by the input button (5) and manual selector (9).

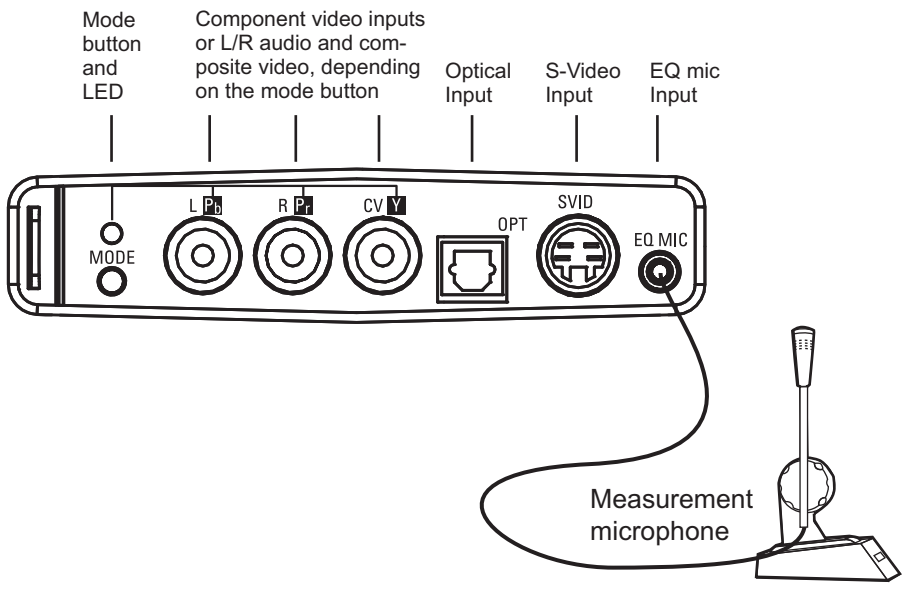
Note: The remote control has a FRTMD button (front mode) in the Main Zone and Zone 2. This works the same as pressing the front door panel Mode button, changing the three front RCA inputs from L/R/composite video, to component video inputs.

18. Headphone output

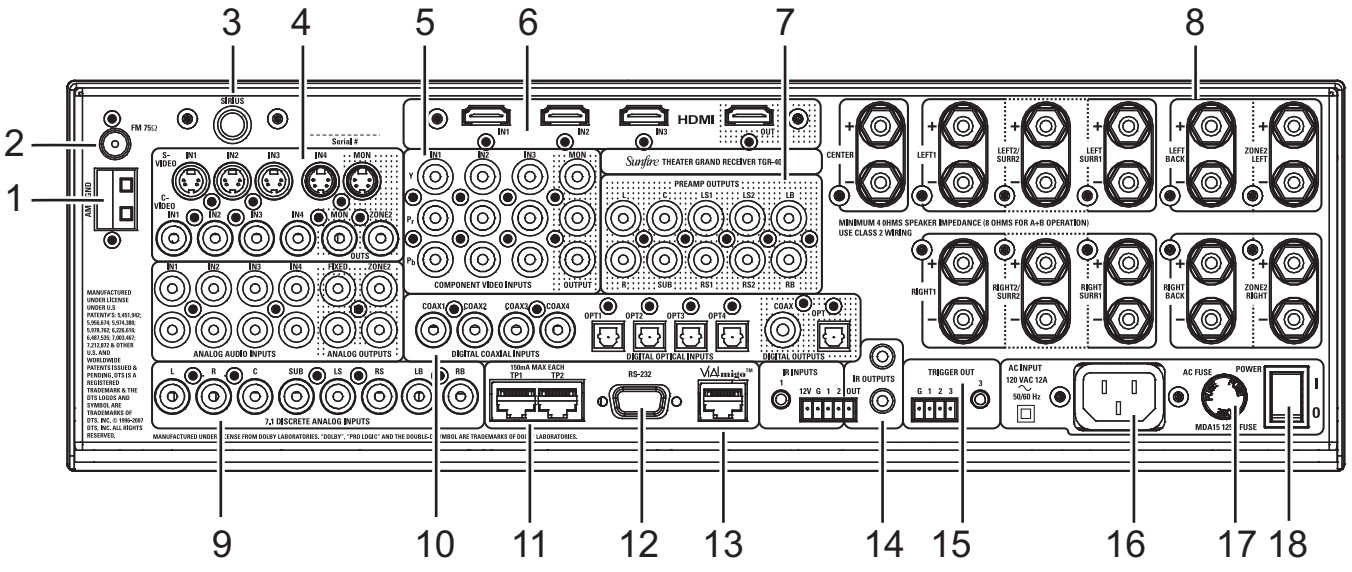
This is where to connect your headphones. In the MODES menu of the on screen display, the headphone output trim can be adjusted relative to the setting of the main volume level (11). Also in the MODES menu and with the remote, you can select Dolby Headphone technology on or off.

Dolby Headphone technology enables you to experience the surround effects of a five-channel, six-channel, or seven-channel soundtrack through standard stereo headphones.

⚠ Make sure that the volume level is turned down when connecting headphones, or when playing a new source, or making any changes. This will help protect your hearing from damage.



Rear Panel Features



1. AM Antenna

These connections are for the supplied AM loop antenna.

2. FM Antenna

The supplied FM antenna fits this “F-type” coaxial connector. Other antennas can be fitted for improved reception.

3. SIRIUS Connection

This connection is provided for the optional SIRIUS tuner kit (SC-H1P1). This consists of an antenna for picking up satellite radio transmissions, and a tuner unit that connects here. The connection allows left and right audio and control data to enter the TGR-401. The OSD menus of the TGR-401 allow you to select your favorite SIRIUS Satellite radio stations as presets for easy recall. See page 63 for more details.

4. Audio/Video

These audio, composite-video and S-video inputs connect to the outputs of your audio video components. When these inputs are selected, the audio will be heard in your system, and the video will be seen on the TV screen.

Fixed audio output is available, for example for stereo recording to a tape player, independent of the TGR-401 volume. A stereo audio Zone 2 output is also available.

S-Video and composite video outputs are available for monitoring, as well as a composite video output for Zone 2. Note that the video sources you would like to play in Zone 2 must use composite video. (There is no video up/down conversion in Zone 2.)

5. Component Video

These inputs connect to the component-video outputs of your video sources if they have this capability. When these inputs are selected, the TGR-401 will automatically route any video signals going into these jacks to the component video outputs. Note that component video provides the best picture compared to composite or S-video.

If your TV Monitor has component video inputs, connect them to the TGR-401's component outputs. The TGR-401 can also up-convert composite video and S-video from the other inputs.

6. HDMI

Use these to connect any HDMI components you may have in your system. Three are inputs, and one is an output to your HDMI-equipped TV. This supports 1080p and HDMIv1.3a sources. No on-screen-display or audio decoding inside the TGR-401 is available from the HDMI inputs. Always connect a separate digital audio input cable when using HDMI.

7. Preamp Outputs

These line-level audio outputs allow you to use external amplifiers to power your loudspeakers. There are outputs for L, R, C, LS1, RS1, LS2, RS2, LB, RB, and SUB.

8. Speaker-level Outputs

These speaker-level audio outputs connect to the input posts of your loudspeakers.

9. 8-CH Inputs

These analog audio inputs can connect to the output of an external surround processor, or a source component such as DVD-Audio, SACD, or a DVD player

with its own surround decoder. You can select this as an input from the front panel or remote control. The eight channels of analog audio will then pass into the TGR-401.

Note: if you use HD-DVD or Blu-ray DVD players that have 7.1 analog audio outputs, use this 8-channel input. It is fully processed in DSP with bass management, speaker delays and tone controls. Only the left/right jacks are available in Zone 2.

10. Digital Connections

There are four S/PDIF digital coaxial inputs, with one coaxial output, and four digital optical inputs with one optical output.

Use these with source equipment that has digital audio connections.

11. TP1 and TP2

Optional Olé-2SF Film Interactive touchpads are available for external control of Zone 2 or the Main Zone.

These wall-mounted touchpads connect to TP1 or TP2 using standard CAT-5 cable.

Please contact your Sunfire dealer for more information. Use only touchpads that are recommended by Sunfire.

Do not connect these ports to Ethernet or other computer networks.

12. RS-232 Port

This communications port allows future updates of the software from Sunfire to be made to your TGR-401. It may also be used for control by 3rd party integration systems.

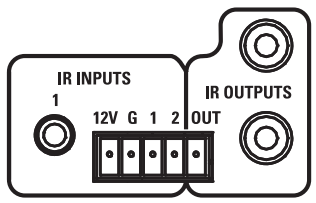
13. VIA!migo Port

This port allows connection of a proprietary VIA!migo iPod docking station system available from Sunfire.

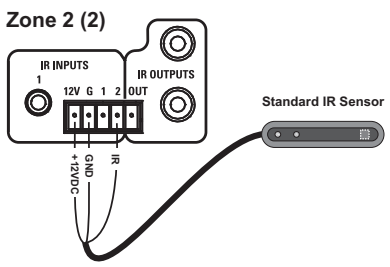
Do not connect this port to Ethernet or other computer networks.

14. Infrared (IR)

These inputs and outputs are used in custom installations to control the Main Zone and Zone 2 from a remote location.



The Infrared (IR) Input on the TGR-401 utilizes Tip as +12V, Ring as IR, and Sleeve as Ground. In order to correctly utilize standard two or three wire IR equipment, the wiring needs to be connected as shown.



Use the screw terminal input to connect standard IR distribution equipment (such as an IR sensor) for Main Zone or Zone 2 operation. The screw terminals accepts bare wire connections (2 or 3-wire input and 2-wire output).

The remote sensors can be in a different room, or your main room.

15. Trigger Outputs

These allow the TGR-401 to control the turn-on of other trigger-enabled equipment in your system.

16. IEC Line Cord Socket

The TGR-401 comes with a detachable linecord that connects here.

Plug the line cord into an AC wall socket or power strip that is correctly configured with the voltage specified for your model.

17. AC Line Fuse

Always unplug the linecord from the AC Mains before checking or changing the fuse. If this fuse blows, you must replace it with a fuse of exactly the same size and current rating.

18. Power Switch

If this is switched off, the TGR-401 will be off, and cannot be turned on even with the front panel power switch, the remote control, or optional Olé-2SF touchpads.

In normal operation, leave this switch on. Turn it off if you will not be using the TGR-401 for extended periods.

CHAPTER 1

Installation

Observe the following precautions when choosing a location for your TGR-401:

> Make sure the TGR-401 has good ventilation. Do not cover any of the ventilation slots, or fit the receiver inside a sealed cabinet without good air flow.

- Protect it from prolonged exposure to direct sunlight and other direct sources of heat, such as heating vents and radiators.
- Do not expose the unit to rain or moisture. If fluid or a foreign object should enter the unit, immediately turn off the power and contact your Sunfire Dealer.
- Avoid excessive exposure to extreme cold or dust.
- Do not place heavy objects on top of the unit.

AC Power Considerations

Ensure that the unit is plugged into an outlet capable of supplying the correct voltage specified for your model.

Care

If you need to clean the front surface, first turn off the power and then use a soft dry cloth, rubbing with the grain. Be careful not to scratch the display window.

Connection Tips

Before setting up your new system, please consider the following :

> Always make sure that your components are all turned OFF, or unplugged before making or changing any connections.

- Whenever possible, route the power cords away from the signal cables or speaker wires to prevent any hum or interference heard in the speakers.
- Choose reliable hookup cables. They should be fully shielded and as short as possible.
- Use quality coaxial digital cables to connect the TGR-401 to any source equipment which has coaxial digital outputs.
- Some patch cords can be a very tight fit and there is usually a preferred method of getting them off. Some have to be removed with a twisting action. Be gentle or you may damage the jacks of your TGR-401, or other components.
- Some audiophile cables should be hooked up in one direction, these are usually marked with arrows.
- It is usual for the right channel patch cord plugs to be red and the left channel connections to be white, grey or black. Composite video connections are usually yellow.

Video Connections

The TGR-401 has four types of video connections: composite video, S-video, component video and HDMI. Choose component or S-video if your video system supports it, as this will give better picture quality than composite video.

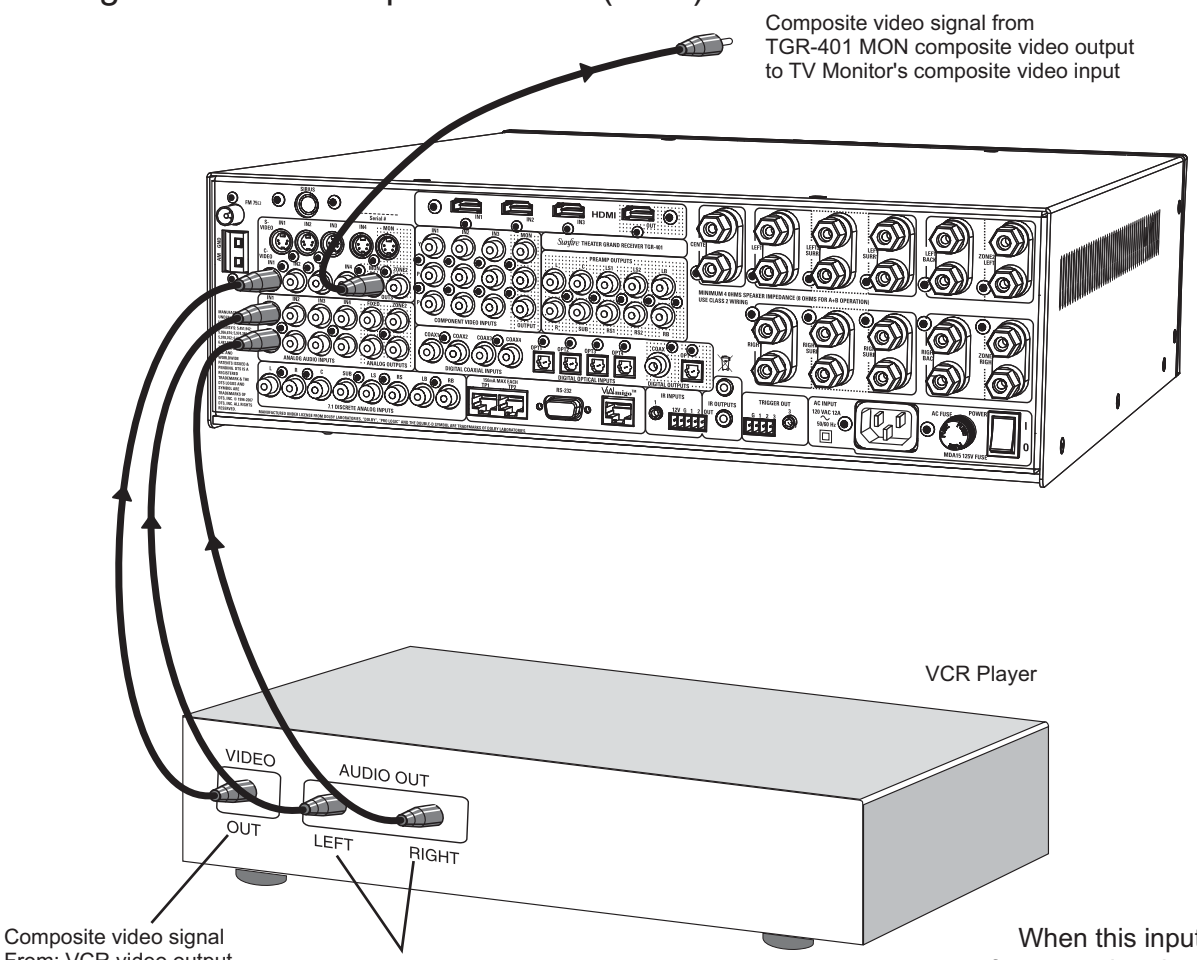
When an audio/video component is selected, the audio will play in your system and the video will be switched to a video input of your TV monitor.

You must have the TV connected in order to see the On Screen Display (OSD). No OSD is available on HDMI.

System Configurations

The following pages show some typical connections that you might make in your installation. They show how the inputs and outputs of the TGR-401 are connected to various audio and video components.

Analog Audio and Composite Video (VCR)



When this input is selected from the front panel or the remote control, the VCR's audio will play in your system and the video is sent to the TV.

As with all the video connections that follow, you must make sure that your TV monitor is set to look at its correct video input or you will not see the picture.

If your TV and other video components have S-Video connections, use them, as they provide better picture quality than composite video.